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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,419	02/26/2002	Vincent C. Skurdal	10016652-1	3494

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
RUDOLPH, VINCENT M	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,419	SKURDAL ET AL.	
	Examiner	Art Unit	
	Vincent M. Rudolph	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-11, 13-20, 23, 25-29, 32, 34-40, 42-45 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda ('073) in view of Tillotson ('814).

Regarding claim 35, Kuroda ('073) discloses an apparatus, which contains memory (RAM, See Figure 1, Element 12), a processor (CPU, See Figure 1, Element 11), and ROM (See Figure 1, Element 13), which contains computer-readable instructions for the apparatus (See Col. 9, Line 45-46). The apparatus receives data defining a document having a plurality of logical pages through an application that wishes to be printed (a plurality of total pages if it contains more than one page once sent to the apparatus, See Col. 10, Line 65-Col. 11, Line 5). The data is then processed to identify any characteristics so an appropriate N-Up print mode is selected (the number of logical pages per print medium page is calculated and generated, See Col. 11, Line 38-52).

Kuroda ('073) does not disclose identifying one or more characteristics that indicates visual discernability to the human eye of a feature of data.

Tillotson ('814) discloses identifying a default image size for the print document in order to establish a maximum acceptable number of pages for one side of paper (in order to not make the pages too small for the eye to read, See Col. 2, Line 6-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the document size identifier of Tillotson ('814) and incorporate it into the apparatus of Kuroda ('073) because a user is then able to have an acceptable amount of readable pages on a sheet rather than being able to generate more pages yet have the pages more difficult for the eyes to read.

Regarding claim 36, Kuroda ('073) discloses the data that is processed is associated with text, such as the character print command (See Col. 14, Line 20-23).

Regarding claim 37, Kuroda ('073) discloses the data that is processed is associated with graphics, such as the image draw command that contains the bit map data (See Col. 14, Line 16-25).

Regarding claim 38, Kuroda ('073) discloses the data that is processed is associated with both text and graphics, such as the character print command and image draw command (See Col. 14, Line 16-18).

Regarding claim 39, Kuroda ('073) discloses that the N-Up printing mode is selected based by performing a mapping operation, such as selecting it as an option (See Figure 5), and also based on the characteristic, such as the number of pages, effect to map, or layout, an N-Up mode (See Col. 11, Line 38-52).

Regarding claims 1-3, 5, 9-11 and 13, the rationale provided in the rejection of claims 35-39 is incorporated herein respectively. In addition, the apparatus of claims

35-39 corresponds to the computer-implemented method and computer-readable medium of claims 1-5 and 9-13 and performs the steps disclosed, respectively.

Regarding claim 6, Kuroda ('073) discloses that a look-up table is used to contain a plurality of characteristic values and N-Up mode values, which is associated with the characteristic values, or number of pages (See Figure 12).

Regarding claim 7, Kuroda ('073) discloses changing a predetermined relationship between a characteristic and the number of logical pages per print medium page (changing the default layout sequence and the number of pages, See Figure 5), so future documents will have the same layout associated with the changed relationship (See Col. 13, Line 43-47).

Regarding claim 8, Kuroda ('073) discloses the changing the print mode (See Figure 5) is performed responsive to the user input, or changes the user made (See Col. 13, Line 30-37).

Regarding claim 18, Kuroda ('073) discloses at least one characteristic pertaining to the font size, such as the character width and height (See Col. 14, Line 19-22) which effects the number of pages used to select the N-Up mode based on the size of the characters.

Regarding claim 19, Kuroda ('073) discloses a characteristic pertaining to the smallest font size that would appear on the printed document, such as the character height (See Col. 14, Line 19-22) which effects the number of pages used to select the N-Up mode based on the size of the characters.

Regarding claim 20, Kuroda ('073) discloses a characteristic pertaining to the font type, such as the kinds of characters within the character print command (See Col. 14, Line 20-21).

Regarding claim 23, Kuroda ('073) discloses the data that is processed is associated with graphics, such as the image draw command that contains the bit map data (See Col. 14, Line 16-25).

Regarding claim 25, Kuroda ('073) discloses the receiving data comprises bit map data (See Col. 14, Line 16-19).

Regarding claims 14-16 and 34, the rationale provided in the rejection of claims 6-8 and 25 is incorporated herein respectively. In addition, the computer-implemented method of claims 6-8 and 25 corresponds to the computer-readable medium of claims 14-16 and 34 and performs the steps disclosed, respectively.

Regarding claims 17 and 26, the rationale provided in the rejection of claim 35 is incorporated herein. In addition, the apparatus of claim 35 corresponds to the computer-implemented method and computer-readable medium of claims 17 and 26 and additionally Kuroda ('073) discloses the data is processed to identify characteristics of the data, such as font, or character print command. Using this characteristic, the font's height and size effects the number of pages to be printed which in turn determines the appropriate number of logical pages per print medium page for the N-Up printing mode to appear on a printed document (See Col. 14, Line 19-22).

Regarding claims 27-29 and 32, the rationale provided in the rejection of claims 18-20 and 23 is incorporated herein respectively. In addition, the computer-

implemented method of claims 18-20 and 23 corresponds to the computer-readable medium of claims 27-29 and 32 and performs the steps disclosed, respectively.

Regarding claim 40, Kuroda ('073) discloses that the apparatus can be embodied as a printer (See Figure 1, Element 15; Col. 9, Line 65- Col. 10, Line 11).

Regarding claim 42, Kuroda ('073) discloses that the apparatus can be embodied as a server, such as computer, to serve as a data source (See Figure 1; Col. 8, Line 66- Col. 9, Line 5).

Regarding claim 43, Kuroda ('073) discloses a printing system (Figure1) that is designated with the N-Up print analysis module (See Col. 11, Line 38-40). The N-up analysis module receives the data defining a document having a plurality of logical pages from the application that is going to be printed (a plurality of total pages if it contains more than one page once sent to the printing system, See Col. 11, Line 38-45). The N-up analysis module then processes the data to identify any characteristics, such as the number of pages, so an appropriate N-Up print mode is selected to print the document based on the number of logical pages per print medium page (See Col. 11, Line 47-52). The N-up module includes a text analyzer, or character print command, and graphics analyzer, or image draw command (See Col. 14, Line 16-25), to process the data prior to being printed (the number of logical pages per print medium page is calculated and generated, See Col. 11, Line 43-52).

Kuroda ('073) does not disclose identifying one or more characteristics that indicates visual discernability to the human eye of a feature of data.

Tillotson ('814) discloses identifying a default image size for the print document in order to establish a maximum acceptable number of pages for one side of paper (in order to not make the pages too small for the eye to read, See Col. 2, Line 6-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the document size identifier of Tillotson ('814) and incorporate it into the apparatus of Kuroda ('073) because a user is then able to have an acceptable amount of readable pages on a sheet rather than being able to generate more pages yet have the pages more difficult for the eyes to read.

Regarding claims 44 and 45, the rationale provided in the rejection of claims 6 and 5 is incorporated herein respectively. In addition, the computer-implemented method of claims 6 and 5 corresponds to the printing system of claims 44 and 45 and performs the steps disclosed, respectively.

Regarding claim 49, Kuroda ('073) discloses the N-Up analysis module is embodied in a server, such as a host or personal computer, to determine the appropriate print mode for the document (See Figure 5; Col. 38-42).

Regarding claim 50, Kuroda ('073) does not disclose the selected number of logical pages per print medium page renders a feature visually discernable to the human eye.

Tillotson ('814) discloses identifying a default image size for the print document in order to establish a maximum acceptable number of pages for one side of paper (in order to not make the pages too small for the eye to read, See Col. 2, Line 6-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the document size identifier of Tillotson ('814) and incorporate it into the apparatus of Kuroda ('073) because a user is then able to have an acceptable amount of readable pages on a sheet that would be readable for the eye.

Regarding claim 51, Kuroda ('073) does not disclose a feature is text having a font size that corresponds to the smallest font size in the document, and as a result, a selected number of logical pages per print medium renders the text readable by the human eye.

Tillotson ('814) discloses performing a pagination process on the document using the control characters to determine an initial number of total pages and if it is acceptable or not to be readable (See Col. 4, Line 56-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the text size identifier of Tillotson ('814) and incorporate it into the apparatus of Kuroda ('073) because the user is then able to interpret all the text included within the readable pages on a sheet rather than having to select a different N-up print mode if it was not readable.

Regarding claim 52, Kuroda ('073) does not disclose a feature is a graphic, and a selected number of logical pages per print medium renders the graphic readable by the human eye.

Tillotson ('814) discloses performing a pagination process on the document using the control characters to determine an initial number of total pages and if it is acceptable or not to be readable (See Col. 4, Line 56-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the text size identifier of Tillotson ('814) and incorporate it into the apparatus of Kuroda ('073) because the user is then able to identify the graphic included within the readable pages on a sheet rather than having to select a different N-up print mode if it was not able to be viewable by the human eye.

Claims 21-22 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda ('073) in view of Tillotson ('814) as applied to claims 17 and 26 and further in view of Moseley and Boodey.

Regarding claim 21, Kuroda ('073) discloses processing the data to identify characteristics of the data, such as the number of pages, prior to sending the information to the printer (See Col. 11, Line 4-8; Col. 11, Line 47-52).

Kuroda ('073) does not disclose having a characteristic pertaining to a font complexity.

Moseley and Boodey disclose that within their application program, Microsoft Word, the user has the option to customize the font complexity, whether times new roman, arial, courier, etc., on the toolbar prior to outputting it (See Page 168).

It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to include font complexity in the application program, such as Microsoft Word, incorporated into the data processing of Kuroda ('073) because the user has the option to select one of many font complexities to enhance the document prior to having the data processed and outputted onto a printer.

Regarding claim 22, Kuroda ('073) discloses processing the data to identify characteristics of the data, such as the number of pages, prior to sending the information to the printer (See Col. 11, Line 4-8; Col. 11, Line 47-52).

Kuroda ('073) does not disclose having a characteristic pertaining to one graphics-based font.

Moseley and Boodey disclose that within their application program, Microsoft Word, the user has the option to insert graphics-based font, such as symbols or special characters like bullets, into the document prior to outputting it (See Page 295).

It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to include font size in the application program, such as Microsoft Word, incorporated into the data processing of Kuroda ('073) because the user has the option to add graphics-based font onto the document page and have the data processed and outputted onto a printer.

Regarding claims 30-31, the rationale provided in the rejection of claims 21-22 is incorporated herein respectively. In addition, the computer-implemented method of claims 21-22 corresponds to the computer-readable medium of claims 30-31 and performs the steps disclosed, respectively.

Claims 24, 33, 41 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda ('073) in view of Tillotson ('814) as applied to claims 17, 26, 35 and 43 and further in view of Teranishi (Pub. # 20020051205).

Regarding claim 24, Kuroda ('073) discloses that the receiving data comprises receiving printer control command, to transmit to the printer (See Col. 9, Line 64-Col. 10, Line 4).

Kuroda ('073) does not disclose receiving page description language data.

Teranishi (Pub. # 20020051205) discloses the image data is prepared into page description language data (See Paragraph 0102).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have the page description language data of Teranishi (Pub. # 20020051205) and incorporate it into the data received by the printer of Kuroda ('073) because the printer control language is commonly used with printers so adding the feature allows it to communicate with the printer and properly print out the data received.

Regarding claim 33, the rationale provided in the rejection of claim 24 is incorporated herein. In addition, the computer-implemented method of claim 24 corresponds to the computer-readable medium of claim 33 and performs the steps disclosed.

Regarding claim 41, Kuroda ('073) discloses that the apparatus can be embodied as a personal computer (See Figure 1, Element 1; Col. 9, Line 7-17).

Kuroda ('073) does not disclose the apparatus is embodied as a client computing device

Teranishi (Pub. # 20020051205) discloses a client computing device, such as client computers (See Figure 1), to send various image data to be printed (See Paragraph 0053).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have a client computer such as the one disclosed by Teranishi (Pub. # 20020051205) and incorporate it into the apparatus disclosed by Kuroda ('073) because by having the computer as a client computing device, the user is able to have prints jobs requested and sent to a printer.

Regarding claim 48, Kuroda ('073) discloses the N-Up analysis module is embodied in a personal computer, to determine the appropriate print mode for the document (See Figure 5; Col. 38-42).

Kuroda ('073) does not disclose the apparatus is embodied in a client computer.

Teranishi (Pub. # 20020051205) discloses a client computer (See Figure 1) to send various image data to be printed (See Paragraph 0053).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have a client computer such as the one disclosed by Teranishi (Pub. # 20020051205) and incorporate it into the personal computer disclosed by Kuroda ('073) because by having the computer as a client, the user is able to have the N-Up analysis module to prints jobs by a printer.

Regarding claim 46, Kuroda ('073) discloses that data is generated to the print driver so it can be printed (See Col. 12, Line 2-13).

Kuroda does not disclose the N-Up analysis module is embodied as a print driver.

In regards to *In re Japikse*, 86 USPQ 70 (CCPA 1950), the court determined that there would be no invention in shifting since the operation of the device would not thereby be modified. So, moving the N-Up analysis from in the host computer to a print driver would have been obvious because the operation would not have been modified.

Regarding claim 47, Kuroda ('073) discloses the N-Up analysis module is selected prior to being printed in a printer (See Col. 12, Line 20-29).

Kuroda does not disclose the N-Up analysis module is embodied in a printer.

In regards to *In re Japikse*, 86 USPQ 70 (CCPA 1950), the court determined that there would be no invention in shifting since the operation of the device would not thereby be modified. So, moving the N-Up analysis from in the host computer to a printer would have been obvious because the operation would not have been modified.

Response to Arguments

Applicant argues that Kuroda does not disclose about automatically selecting a number of logical pages per print medium page for the N-up printing mode based on the characteristics of at least one feature of data that is indicative of visual discernability to the human eye. Even though Kuroda does not fully disclose automatically selecting based on a characteristic, Kuroda in view of Tillotson discloses this limitation. For example, Tillotson discloses analyzing and calculating the document in order to determine if the image size is an acceptable amount of pages per print medium (See Col. 2, Line 6-15). If the information included within the document, text and/or graphics,

is too small or large, the document is adjusted accordingly so that the largest possible image size is able to be printed onto the fewest number of output sheets.

Based on these facts, this action is made final.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent M. Rudolph whose telephone number is (571) 272-8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VMR
2/17/06

Vincent M. Rudolph
Examiner
Art Unit 2624

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600